

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C. 20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)
27 July 2000 (27.07.00)

International application No.
PCT/GB99/04152

Applicant's or agent's file reference
AJS/D088300PWO

International filing date (day/month/year)
09 December 1999 (09.12.99)

Priority date (day/month/year)
10 December 1998 (10.12.98)

Applicant

HAJEER, Ali et al

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

25 May 2000 (25.05.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Pascal Piriou

Telephone No.: (41-22) 338.83.38

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/04152

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NELSON P J ET AL: "GENOMIC ORGANIZATION AND TRANSCRIPTIONAL REGULATION OF THE RANTES CHEMOKINE GENE"</p> <p>JOURNAL OF IMMUNOLOGY, US, THE WILLIAMS AND WILKINS CO. BALTIMORE,</p> <p>vol. 151, no. 5,</p> <p>1 September 1993 (1993-09-01), pages 2601-2612, XP002047102</p> <p>ISSN: 0022-1767</p> <p>cited in the application</p> <p>see whole doc. esp. p.2610, 1. col.</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

10 April 2000

Date of mailing of the international search report

27/04/2000

Name and mailing address of the ISA

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Fax: (+31-70) 340-3016

Authorized officer

Müller, F

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/04152

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SNOWDEN N. ET AL.,: "Rantes role in rheumatoid arthritis" THE LANCET, vol. 343, - 26 February 1994 (1994-02-26) pages 547-548, XP002135174 cited in the application the whole document	
A	ARENZANA-SEISDEDOS F ET AL: "HIV BLOCKED BY CHEMOKINE ANTAGONIST" NATURE, GB, MACMILLAN JOURNALS LTD. LONDON, vol. 383, no. 6599, 3 October 1996 (1996-10-03), page 400 XP002027718 ISSN: 0028-0836 the whole document	
A	COCCHI F ET AL: "IDENTIFICATION OF RANTES, MIP-1ALPHA, AND MIP-1BETA AS THE MAJOR HIV-SUPPRESSIVE FACTORS PRODUCED BY CD8+ T CELLS" SCIENCE, US, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, vol. 270, 15 December 1995 (1995-12-15), pages 1811-1815, XP000616644 ISSN: 0036-8075 cited in the application the whole document	
P,A	WO 99 37815 A (AKZO NOBEL NV ; SHURTLIFF ROXANNE (US); WILLIAMS KIMBERLY G (US); R) 29 July 1999 (1999-07-29)	
P,X	HAJEER A.H. ET AL.,: "A polymorphism at position -403 in the human Rantes promoter" EUROP. J. IMMUNOGENETICS, vol. 26, no. 5, - October 1999 (1999-10) pages 375-376, XP000901614 the whole document	1-5, 8-12,14
P,X	AL SHARIF F. ET AL.,: "A rare polymorphism at position -28 in the human Rantes promoter" EUROP. J. IMMUNOGENETICS, vol. 26, no. 5, - October 1999 (1999-10) pages 373-374, XP000901613 see whole doc. the whole document	1-3, 6-11,13, 14

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/04152

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>LIU H. ET AL.,: "Polymorphism in Rantes chemokine promoter affects HI-1 disease progression"</p> <p>PROC. NATL. ACAD. SCI. USA,</p> <p>vol. 96, no. 8,</p> <p>- 13 April 1999 (1999-04-13) page 4581</p> <p>XP002135175</p> <p>cited in the application</p> <p>the whole document</p> <p>-----</p>	1-20



PATENT COOPERATION TREATY

PCT

REC'D 23 FEB 2001

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference AJS/D088300PWO	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/04152	International filing date (day/month/year) 09/12/1999	Priority date (day/month/year) 10/12/1998
International Patent Classification (IPC) or national classification and IPC C12Q1/68		
Applicant THE VICTORIA UNIVERSITY OF MANCHESTER et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 6 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 25/05/2000	Date of completion of this report 19.02.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Hinchliffe, P Telephone No. +49 89 2399 8431



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/04152

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).):*

Description, pages:

1-38 as originally filed

Claims, No.:

1-20 as originally filed

Drawings, sheets:

1/8-8/8 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/04152

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application.
☒ claims Nos. 15-20 with respect to I.A..

because:

- ☒ the said international application, or the said claims Nos. 15-20 relate to the following subject matter which does not require an international preliminary examination (*specify*):
see separate sheet
- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .
2. A meaningful international preliminary examination report cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:
- ☐ the written form has not been furnished or does not comply with the standard.
- ☐ the computer readable form has not been furnished or does not comply with the standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims 1-20

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/04152

	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-20
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-14
	No:	Claims	15-20

2. Citations and explanations
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
SEPARATE SHEET**

International application No. PCT/GB99/04152

ITEM III

1. Claims 15-20 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of these claims (Article 34(4)(a)(i) PCT).

ITEM V

1. The subject matter of the claims would appear to fulfill the requirements of both Articles 33(2) and 33(3) PCT insofar as none of the documents cited in the ISR disclose a link between RANTES polymorphisms and disease. Consequently a method of linking the disease with a polymorphism in the RANTES gene expression is new and involves an inventive step.
2. For the assessment of the present claims 15-20 on the question whether they are industrially applicable, no unified criteria exist in the PCT Contracting States. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but may allow, however, claims to a known compound for first use in medical treatment and the use of such a compound for the manufacture of a medicament for a new medical treatment.

ITEM VIII

1. Contrary to the requirements of Article 6 PCT, the subject matter of claims 1-4, 8-11, 14-20 is not sufficiently supported by the description. The skilled person, when trying to repeat the said claims would be in position of the teachings made in the prior art. In particular D1 (as cited in the ISR) would indicate that a huge number of transcription binding elements are to be found in the 5' untranslated region of the gene. Furthermore from D2, D3 and D4 (as cited in the ISR) the skilled person would also be aware of the implications of the gene in various disorders. Consequently the reference to an unknown polymorphism and an unknown disease (as found in these claims) would be considered to be unclear as the

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
SEPARATE SHEET**

International application No. PCT/GB99/04152

skilled person would be required to carry out a massive screening of cell types and genotypes. In addition the only work supported by the description relates to the -400 and -28 polymorphisms.

Consequently the subject matter of the independent claims should relate to these polymorphisms in order to fulfill the requirements of Article 6 PCT.

2. Claims 4,6,12,13 contain a reference to a published document. The application as a whole should be self contained and thus a reference to a sequence found in a prior art document that is essential to the *modus operandi* of the invention is thus considered to be unclear (Article 6 PCT).

PCT



WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C12Q 1/68	A1	(11) International Publication Number: WO 00/34516 (43) International Publication Date: 15 June 2000 (15.06.00)
(21) International Application Number: PCT/GB99/04152 (22) International Filing Date: 9 December 1999 (09.12.99) (30) Priority Data: 9827032.5 10 December 1998 (10.12.98) GB 9922984.1 29 September 1999 (29.09.99) GB (71) Applicant (for all designated States except US): THE VICTORIA UNIVERSITY OF MANCHESTER [GB/GB]; Oxford Road, Manchester M13 9PL (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): HAJEER, Ali [GB/GB]; 36 Delacourt Road, Fallowfield, Manchester M13 6BX (GB). OLLIER, William [GB/GB]; 14 Brooklands Drive, Goostry, Cheshire CW4 8JB (GB). (74) Agent: ATKINSON, Peter, Birch; Marks & Clerk, Sussex House, 83-85 Mosley Street, Manchester M2 3LG (GB).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: DETECTION OF RANTES GENE PROMOTOR POLYMORPHISMS (57) Abstract The present invention relates to an <i>in vitro</i> method for diagnosing or detecting a predisposition to a disease or disorder associated with abnormal RANTES gene expression, the method comprising examining the RANTES gene promoter to detect the presence of a genetic polymorphism and a method of treatment of patients with such diseases comprising administering a RANTES modulator.		

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece			TR	Turkey
BG	Bulgaria	HU	Hungary	ML	Mali	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MN	Mongolia	UA	Ukraine
BR	Brazil	IL	Israel	MR	Mauritania	UG	Uganda
BY	Belarus	IS	Iceland	MW	Malawi	US	United States of America
CA	Canada	IT	Italy	MX	Mexico	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NE	Niger	VN	Viet Nam
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CH	Switzerland	KG	Kyrgyzstan	NO	Norway	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	NZ	New Zealand		
CM	Cameroon			PL	Poland		
CN	China	KR	Republic of Korea	PT	Portugal		
CU	Cuba	KZ	Kazakstan	RO	Romania		
CZ	Czech Republic	LC	Saint Lucia	RU	Russian Federation		
DE	Germany	LI	Liechtenstein	SD	Sudan		
DK	Denmark	LK	Sri Lanka	SE	Sweden		
EE	Estonia	LR	Liberia	SG	Singapore		

INTERNATIONAL SEARCH REPORT

International Application No
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☒ Further documents are listed in the continuation of box C.

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* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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10 April 2000

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
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Fax: (+31-70) 340-3016

Authorized officer

Müller, F

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/04152

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International Application No

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 99/04152

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claims 15-17 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

information on patent family members

Interr: 1st Application No

PCT/GB 99/04152

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9937815 A	29-07-1999	AU 2333799 A	09-08-1999

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference AJS/D088300PWO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 04152	International filing date (day/month/year) 09/12/1999	(Earliest) Priority Date (day/month/year) 10/12/1998
Applicant THE VICTORIA UNIVERSITY OF MANCHESTER et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.
☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☒ furnished subsequently to this Authority in written form.

☒ furnished subsequently to this Authority in computer readable form.

☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

DETECTION OF RANTES GENE PROMOTOR POLYMORPHISMS

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 99/ 04152

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claims 15-17 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/GB 99/04152

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>NELSON P J ET AL: "GENOMIC ORGANIZATION AND TRANSCRIPTIONAL REGULATION OF THE RANTES CHEMOKINE GENE"</p> <p>JOURNAL OF IMMUNOLOGY, US, THE WILLIAMS AND WILKINS CO. BALTIMORE,</p> <p>vol. 151, no. 5,</p> <p>1 September 1993 (1993-09-01), pages 2601-2612, XP002047102</p> <p>ISSN: 0022-1767</p> <p>cited in the application</p> <p>see whole doc. esp. p.2610, 1. col.</p> <p style="text-align: center;">---</p> <p style="text-align: center;">-/--</p>	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

10 April 2000

Date of mailing of the international search report

27/04/2000

Name and mailing address of the ISA

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Müller, F

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/04152

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SNOWDEN N. ET AL.,: "Rantes role in rheumatoid arthritis" THE LANCET, vol. 343, - 26 February 1994 (1994-02-26) pages 547-548, XP002135174 cited in the application the whole document ---	
A	ARENZANA-SEISDEDOS F ET AL: "HIV BLOCKED BY CHEMOKINE ANTAGONIST" NATURE, GB, MACMILLAN JOURNALS LTD. LONDON, vol. 383, no. 6599, 3 October 1996 (1996-10-03), page 400 XP002027718 ISSN: 0028-0836 the whole document ---	
A	COCCHI F ET AL: "IDENTIFICATION OF RANTES, MIP-1ALPHA, AND MIP-1BETA AS THE MAJOR HIV-SUPPRESSIVE FACTORS PRODUCED BY CD8+ T CELLS" SCIENCE, US, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE,, vol. 270, 15 December 1995 (1995-12-15), pages 1811-1815, XP000616644 ISSN: 0036-8075 cited in the application the whole document ---	
P, A	WO 99 37815 A (AKZO NOBEL NV ; SHURLIFF ROXANNE (US); WILLIAMS KIMBERLY G (US); R) 29 July 1999 (1999-07-29) ---	
P, X	HAJEER A.H. ET AL.,: "A polymorphism at position -403 in the human Rantes promoter" EUROP. J. IMMUNOGENETICS, vol. 26, no. 5, - October 1999 (1999-10) pages 375-376, XP000901614 the whole document ---	1-5, 8-12, 14
P, X	AL SHARIF F. ET AL.,: "A rare polymorphism at position -28 in the human Rantes promoter" EUROP. J. IMMUNOGENETICS, vol. 26, no. 5, - October 1999 (1999-10) pages 373-374, XP000901613 see whole doc. the whole document ---	1-3, 6-11, 13, 14

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/04152

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>LIU H. ET AL.,: "Polymorphism in Rantes chemokine promoter affects HI-1 disease progression" PROC. NATL. ACAD. SCI. USA, vol. 96, no. 8, - 13 April 1999 (1999-04-13) page 4581 XP002135175 cited in the application the whole document -----</p>	1-20

INTERNATIONAL SEARCH REPORT



Information on patent family members



International Application No

PCT/GB 99/04152

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
W0 9937815 A	29-07-1999	AU 2333799 A	09-08-1999